

Power Transmission—Behind the Scenes

MOTION CONTROLLER GETS ITS 15 MINUTES IN ENTERTAINMENT APPLICATIONS



Building a mast that extends as high as a 12-story building with the capability to support a full-size 50 kg camera in potential high winds is no easy task. So when professional cameraman Matthew Gladstone developed the Vortex Aerial Mount Camera System in England, he turned to Trio Motion Technology for position and stability control.

Trio, a niche source for motion control technology, provided its MC206X motion controller to assist Gladstone in creating a portable, remote camera system that can be rigged and de-rigged in minutes—making it suitable for a wide range of camera shots for television and film work. The Vortex camera system can capture high angle shots with a minimal amount of equipment. It's a beneficial alternative for filming sporting events like horse races, golf matches or marathons where organizers prefer less noise and fewer distractions from busy film crews.

The camera mast is constructed using lightweight carbon fiber with each section rigidly interconnected through linear bearings. A central Kevlar cable runs through each section on an internal pulley system using a servomotor geared winch that moves the mast from its horizontal position to its vertical operating position. The servomotor then axially separates each section to lift the camera system up or down during filming.

Ed Novak, U.S. sales manager for Trio, says the MC206X controllers are capable of controlling 1-5 servo or stepper motors in full coordination. These designs allow customers to select their preferred drive, feedback and motor technologies in combination with a wide choice of factory and drive communication networks.

For the camera system, the MC206X provides the mass stiffness

and stability control to capture the final turn of a horse race or aerial shots of the London Marathon. It can lift the camera from the ground level to a height of 30 meters in 15 seconds, allowing for multiple camera setups in the course of a single day.

"Few motion controllers have the performance and flexibility in such a cost effective, compact module," Novak says. "This allows many of our customers to get their applications up and running very quickly."

When London-based Windmill Studios needed synchronized graphics and motion for an exhibition that showcased props, costumes and creatures from the popular science fiction series, *Dr. Who*, they also chose Trio's MC206X.

"Trio's development software is easy to use for configuration and programming," says David Black, a project manager at Windmill Studios. "The project-based approach along with the axis and I/O monitoring and the simplicity of the Trio *BASIC* language allowed for really fast application development."

Although the controllers are featured in several entertainment applications, Novak says the equipment has also been used in industries like food packaging and labeling, window making machines, textile machines, automotive, medical, sign making and extrusion machines.

"These are multipurpose, programmable units that can be used in dozens of different industries."

For more information on the Vortex Aerial Mount Camera System, visit www.cammotion.co.uk. For information on Trio's motion controllers and equipment, visit www.triomotion.com.